

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

- 5 Claim 1 (currently amended): A method of communicating between first and second stations, including the steps of:
- providing at the first station a first preamble including first reverse link parameters and first forward link parameters individual to the first station and providing first data after the preamble,
- 10 transmitting the first preamble and the first data from the first station to the second station in accordance with the first forward link parameters in the first preamble,
- receiving the first preamble and the first data at the second station and recovering the first data at the second station,
- providing a second preamble and second data at the second station, the
- 15 second preamble at the second station including second forward link parameters in accordance with the first reverse link parameters received at the second station from the first station and including second reverse link parameters, and
- transmitting the second preamble including the second forward link parameters and second reverse link parameters and the second data from the second
- 20 station to the first station.

 Claim 2 (currently amended): A method as set forth in claim 1, including the steps of:

 receiving at the first station the second preamble including the second forward link parameters and the second reverse link parameters and the second data from

the second station and recovering the second data at the first station in accordance with the second forward link parameters in the second preamble from the second station.

Claim 3 (currently amended): A method as set forth in claim 2, including the steps of:

- 5 providing at the first station ~~an additional~~ a third preamble and ~~additional~~ third data after the ~~additional~~ third preamble, the ~~additional~~ third preamble including ~~additional~~ third reverse link parameters individual to the first station and third forward link parameters corresponding to the second reverse link parameters and the ~~additional~~ third data constituting new data individual to the first station, and
- 10 transmitting the ~~additional~~ third preamble including the ~~additional~~ third reverse link parameters and the third forward link parameters corresponding to the second reverse link parameters and the ~~additional~~ third data to the second station.

Claim 4 (currently amended): A method as set forth in claim 3, including the steps of:

- 15 receiving at the second station the ~~additional~~ third preamble ~~[[and]]~~ including the additional third reverse link parameters and the third forward link parameters and the ~~additional~~ third data and recovering the ~~additional~~ third data,
- 20 providing a ~~further~~ fourth preamble and ~~further~~ fourth data at the second station, the ~~further~~ fourth preamble at the second station including ~~further~~ fourth forward link parameters in accordance with the ~~additional~~ third reverse link parameters received at the second station from the first station and also including fourth reverse link parameters, and
- 25 transmitting the ~~further~~ fourth preamble including the ~~further~~ fourth reverse link parameters and the fourth forward link parameters and the ~~further~~ fourth data from the second station to the first station.

Claim 5 (currently amended): A method as set forth in claim 1, including the steps of:

providing a higher layer network in the fourth preamble at the second station in place of the third reverse link parameters received at the second station to
5 constitute the fourth forward link parameters in the next preamble transmitted by the second station to the first station.

Claim 6 (currently amended): A method as set forth in claim 1, including the steps of:

10 providing at the first station a preamble including reverse link parameters individual to the first station and providing data after the preamble,

transmitting the preamble and the data from the first station to the second station,

receiving the preamble and the data at the second station and recovering the data at the second station,

15 providing a preamble and data at the second station, the preamble including forward link parameters in accordance with the reverse link parameters received at the second station from the first station,

transmitting the preamble and data from the second station to the first station,

20 providing at the second station a channel estimation from the preamble and the data received at the second station,

providing a reverse link parameters assessment at the second station in accordance with the data received at the second station and the channel estimation at the second station,

formatting a frame at the second station in accordance with the reverse link parameters assessment at the second station and the data to be transmitted at the second station and the forward link parameters, and

5 processing the forward link parameters and the formatted frame at the second station in accordance with the forward link parameters to provide waveforms for transmission to the first station.

Claim 7 (previously amended): A method of communicating between first and second stations, including the steps of:

10 providing at the first station a first preamble including first forward link parameters and first reverse link parameters, both individual to the first station, and providing first data after the first preamble,

transmitting the first preamble and the data from the first station to the second station,

receiving the first preamble and the first data at the second station,

15 recovering the first data at the second station in accordance with the first forward link parameters from the first station,

20 providing at the second station a second preamble including second forward link parameters in accordance with the first reverse link parameters received at the second station and including second reverse link parameters individual to the second station and providing second data after the second preamble, and

transmitting the second preamble and the second data from the second station to the first station.

Claim 8 (previously amended): A method as set forth in claim 7, including the steps of:

receiving at the first station the second preamble and the second data from the second station and recovering the received data in accordance with the second
5 forward link parameters in the second preamble,

providing at the first station a third preamble including third forward link parameters in accordance with the second reverse link parameters received at the first station and including third reverse link parameters individual to the first station and providing third data after the third preamble, and

10 transmitting the third preamble and the third data from the first station to the second station.

Claim 9 (previously amended): A method as set forth in claim 8, including the steps of:

receiving the third preamble and the third data at the second station,

15 recovering the third data at the second station in accordance with the third forward link parameters received in the third preamble at the second station,

providing at the second station a fourth preamble including fourth forward link parameters in accordance with the third reverse link parameters received at the second station and including fourth reverse link parameters individual to the second
20 station and providing fourth data after the fourth r preamble, and

transmitting the fourth preamble and the fourth data from the second station to the first station.

Claim 10 (previously amended): A method as set forth in claim 9, including the steps of:

receiving the fourth preamble and the fourth data at the first station, and

recovering the fourth data at the first station in accordance with the fourth
5 forward link parameters received in the fourth preamble at the first station.

Claim 11 (previously amended): A method as set forth in claim 7, including the steps of:

providing a higher layer network at the second station with a higher priority
than the reverse link parameters from the first station, and

10 providing for the adoption of the higher layer network as the second
forward link parameters at the second station.

Claim 12 (previously amended): A method as set forth in claim 8, including the steps of:

providing a channel estimation from the first preamble and the first data
15 received at the second station,

providing an assessment of the channel estimation and the received data at
the second station to determine the second reverse link parameters individual to the
second station.

Claim 13 (previously amended): A method as set forth in claim 8,

20 receiving at the first station the second preamble and the second data from
the second station and recovering the received data in accordance with the second
forward link parameters in the second preamble,

providing at the first station a third preamble including third forward link parameters in accordance with the second reverse link parameters received at the first station and including third reverse link parameters individual to the first station and providing third data after the third preamble,

5 transmitting the third preamble and the third data from the first station to the second station,

providing a channel estimation from the first preamble and the first data received at the second station, and

10 providing an assessment of the channel estimation and the received data at the second station to determine the second reverse link parameters individual to the second station.

Claim 14 (previously amended): In a method of communicating between first and second stations, the steps of:

15 providing at the first station a first preamble including first forward link parameters and first reverse link parameters,

providing first data after the first preamble, and

transmitting signals representing the first preamble and the first data in a packet to the second station, and

20 providing at the second station a second preamble including second forward link parameters and second reverse link parameters, the second forward link parameters corresponding to the first reverse link parameters.

Claim 15 (previously amended): In a method as set forth in claim 14 wherein a training sequence is included in the first preamble.

Claim 16 (previously amended): In a method as set forth in claim 14 wherein

the first forward link parameters include information relating to at least one
5 of modulation type, code rate of a forward error correction and spreading factor of the signals in the packet.

Claim 17 (previously amended): In a method as set forth in claim 14 wherein

the first reverse link parameters include information relating to at least one
of modulation type, code rate of a forward error rate correction and spreading factor of
10 signals in a preamble in a packet to be transmitted from the second station to the first station.

Claim 18 (previously amended): In a method as set forth in claim 14 wherein

the first preamble includes a training sequence and the training sequence
includes sequences for at least one of sequence synchronization, channel estimation and
15 delay profile.

Claim 19 (previously amended): In a method as set forth in claim 14 wherein

the first forward link parameters include information relating to at least one
of modulation type, code rate of a forward error correction and spreading factor of the
signals in the packet and wherein

20 the first reverse link parameters include information relating to at least one
of modulation type, code rate of a forward error rate correction and spreading factor of
signals in a preamble in a packet to be transmitted from the second station to the first
station and wherein

the first preamble includes a training sequence and the training sequence includes a sequence of at least one of synchronization, channel estimation and delay profile.

5 Claim 20 (previously amended): A method of communicating between a first station and a second station, including the steps of:

providing for each station, in communicating with the other station, a preamble including forward link parameters and reverse link parameters,

providing data for each station to be transmitted to the other station,

10 providing for each station packets each including a preamble to be transmitted from the station to the other station and each including data to be transmitted after the preamble, each preamble including forward link parameters and reverse link parameters,

15 the forward link parameters for the preamble in each station being provided in accordance with the reverse link parameters previously transmitted to the station in a packet from the other station, and

the reverse link parameters for each preamble in each individual station providing an indication to the other station of the forward link parameters to be provided by the other station in the next transmission of a packet from the other station to the individual station.

20 Claim 21 (previously presented): A method as set forth in claim 20 wherein

each preamble to be transmitted from each station to the other station includes a training sequence.

Claim 22 (previously presented): A method as set forth in claim 21 wherein

each training sequence includes at least one of synchronization, channel estimation and delay profile.

Claim 23 (previously amended): In combination,

5 a first station constructed to provide a preamble including forward link parameters and reverse link parameters and including data after the preamble,

a second station displaced from the first station and constructed to provide a preamble including forward link parameters and reverse link parameters and including data after the preamble,

10 each of the stations being constructed to transmit its preamble and data to the other one of the stations for processing by the other one of the stations,

each of the stations being constructed to provide as its forward link parameters the reverse link parameters received from the other station.

Claim 24 (previously presented): In a combination as set forth in claim 23,

15 each of the stations including in the preamble a training sequence for coordinating its station with the operation of the other station.

Claim 25 (previously amended): In a combination as set forth in claim 23,

20 each of the stations including, in the forward link parameters transmitted to the other station, signals for facilitating the recovery of the data transmitted by the other station and for facilitating the processing of the recovered data.

Claim 26 (previously amended): In a combination as set forth in claim 23,

a first higher layer network in the first station,

a second higher layer network in the second station,

the higher layer network in each individual station having a higher priority than the reverse link parameters in the other station in providing the forward link parameters for the individual station.

5 Claim 27 (previously amended): In a combination as set forth in claim 23,

the forward link parameters for each individual station including at least one type of modulation, code rate of forward error corrections and spreading factor of progressive frequencies used in transmitting successive packets of signals from the individual link station to the other station.

10 Claim 28 (previously amended): In a combination as set forth in claim 24,

each of the stations including, in the forward link parameters transmitted to the other station, signals for facilitating the recovery of the data transmitted by the other station and for facilitating the processing of the recovered data,

a first higher layer network in the first station,

15 a second higher layer network in the second station,

the higher layer network in each individual station having a higher priority than the reverse link parameters in the other station in providing the forward link parameters for the individual station, and

20 the forward link parameters for each station including types of at least one of modulation, code rate of forward error corrections and spreading factor of progressive frequencies used in transmitting successive packets of signals between the stations.

Claim 29 (previously presented): In combination in a first station for receiving data from, and transmitting data to, a second station,

a receiver in the first station for receiving from the second station signals including a preamble and data after the preamble, the preamble including forward link parameters and reverse link parameters,

5 a preamble detector in the receiver in the first station for detecting the forward link parameters and the reverse link parameters,

a first processor responsive in the receiver in the first station to the forward link parameters for processing the data in accordance with the forward link parameters, and

a transmitter in the first station,

10 a link adaptation controller in the transmitter in the first station for providing forward link parameters in accordance with the reverse link parameters received by the receiver in the first station from the second station, and

a second processor in the first station for processing data at the transmitter in the first station in accordance with the forward link parameters provided by the link adaptation controller to obtain signals for transmission to the second station.

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Claim 30 (previously amended): In a combination as set forth in claim 29,

an assessor for providing reverse link parameters individual to the first station, and

20 a frame formatter for formatting a preamble including the forward link parameters and the reverse link parameters in a preamble and for formatting the preamble and the data in packets.

Claim 31 (previously presented): In a combination as set forth in claim 29,

a network responsive to higher sources than the reverse link parameters for superseding the reverse link parameters in providing the forward link parameters for the transmitter in the first station.

5 Claim 32 (previously presented): In a combination as set forth in claim 30,

a channel estimator for estimating parameters to be provided in facilitating the recovery of the signals transmitted by the second station to the first station, and

the assessor being responsive to the data received from the second station and to the parameters estimated by the channel estimator for providing the reverse link parameters to the frame formatter.

10 Claim 33 (previously presented): In a combination as set forth in claim 30,

a network responsive to higher sources than the reverse link parameters for superseding the reverse link parameters in providing the forward link parameters for the transmitter,

15 a channel estimator for estimating parameters to be provided in facilitating the recovery at the second station of the signals transmitted by the first station to the second station, and

the assessor being responsive to the data received from the second station and to the parameters estimated by the channel estimator for providing the reverse link parameters to the frame formatter.

20 Claim 34 (previously amended): In combination in a first station for transmitting first data to a second station and for receiving second data from the second station,

a controller for providing forward link parameters having characteristics for facilitating the recovery by the second station of data transmitted by the first station to the second station,

5 an assessor for providing reverse link parameters individual to the first station in facilitating the recovery by the second station of data from the first station and in facilitating the processing of the recovered data by the second station,

10 a formatter responsive to the forward link parameters, the reverse link parameters and the data to be transmitted to the second station from the first station for formatting the forward link parameters, the reverse link parameters and the data into packets, and

a processor at the first station for processing the data in the packets in accordance with the forward link parameters to provide signals for transmission to the second station.

Claim 35 (previously amended): In a combination as set forth in claim 34,

15 an estimator for estimating parameters for facilitating the recovery at the second station of the signals received at the second station from the first station,

the assessor being responsive to the parameters estimated by the estimator for providing the reverse link parameters.